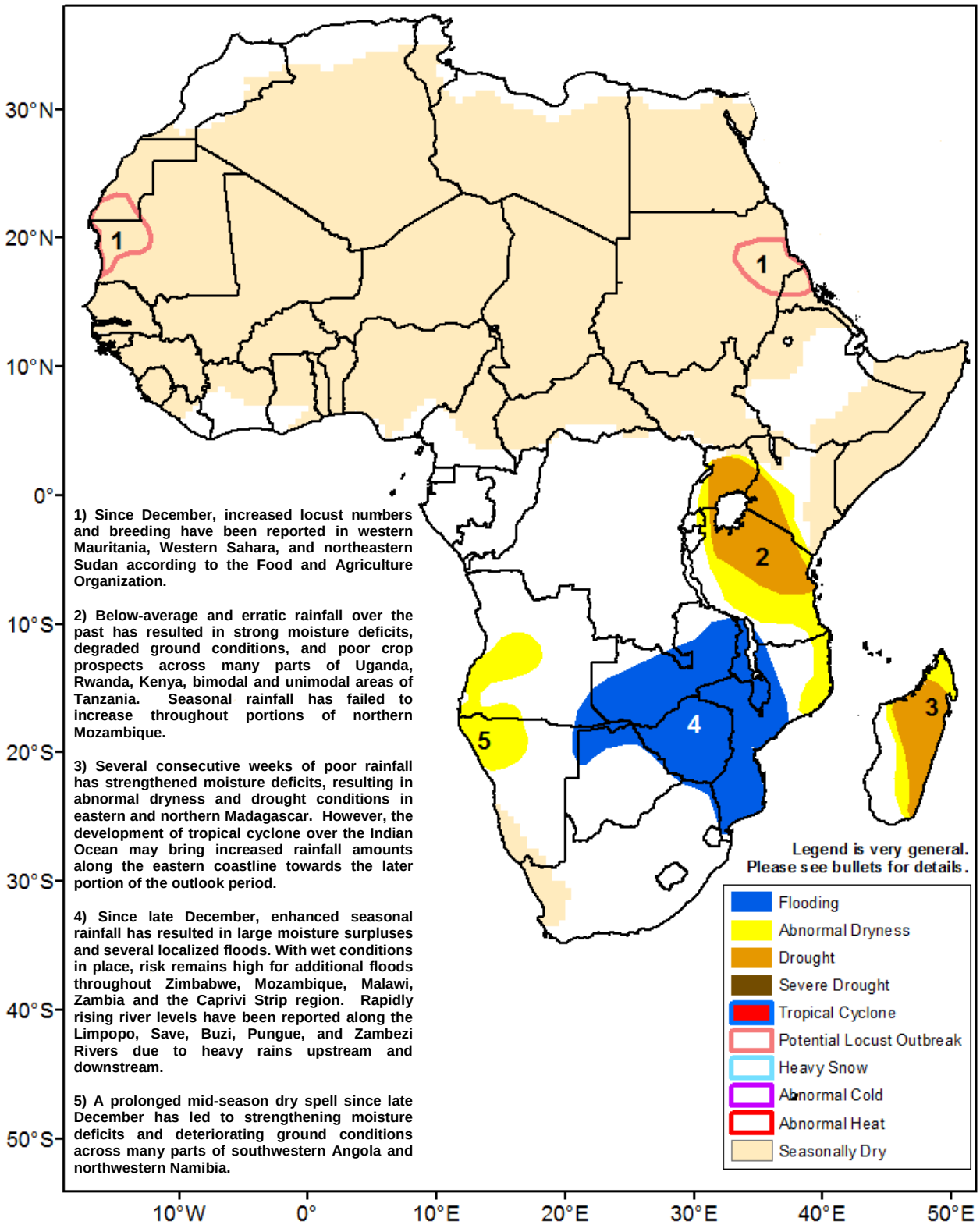
Climate Prediction Center's Africa Hazards Outlook
February 2 – February 8, 2017

- **Heavy rainfall expected over much of Zambia, Malawi and northern Mozambique during the next week.**



1) Since December, increased locust numbers and breeding have been reported in western Mauritania, Western Sahara, and northeastern Sudan according to the Food and Agriculture Organization.

2) Below-average and erratic rainfall over the past has resulted in strong moisture deficits, degraded ground conditions, and poor crop prospects across many parts of Uganda, Rwanda, Kenya, bimodal and unimodal areas of Tanzania. Seasonal rainfall has failed to increase throughout portions of northern Mozambique.

3) Several consecutive weeks of poor rainfall has strengthened moisture deficits, resulting in abnormal dryness and drought conditions in eastern and northern Madagascar. However, the development of tropical cyclone over the Indian Ocean may bring increased rainfall amounts along the eastern coastline towards the later portion of the outlook period.

4) Since late December, enhanced seasonal rainfall has resulted in large moisture surpluses and several localized floods. With wet conditions in place, risk remains high for additional floods throughout Zimbabwe, Mozambique, Malawi, Zambia and the Caprivi Strip region. Rapidly rising river levels have been reported along the Limpopo, Save, Buzi, Pungue, and Zambezi Rivers due to heavy rains upstream and downstream.

5) A prolonged mid-season dry spell since late December has led to strengthening moisture deficits and deteriorating ground conditions across many parts of southwestern Angola and northwestern Namibia.

Lighter, but well distributed rains received across much of southern Africa.

In late January, much of southern Africa saw a reduction in rainfall compared to the last several weeks. According to satellite rainfall estimates, the highest weekly accumulations (>75mm) were registered across parts of northern Zambia, northern Madagascar, central Zimbabwe and parts of northern South Africa, with more light to moderate amounts covering many other flood affected regions in the Caprivi Strip, and over Mozambique (**Figure 1**). In Angola and Namibia, the highest rainfall totals remained towards the east, as unusually lighter amounts (5-25mm) fell across many Atlantic Ocean neighboring provinces. Similarly, many parts of eastern Madagascar continued to observe unfavorably low totals along the coast.

During November through early December, several regions in southern Africa experienced a slight delay to the onset of the monsoon, which resulted in generally average to below-average moisture conditions during the early stages of the season. By late December, a robust increase in seasonal rainfall occurred which helped to alleviate early season dryness. However, due to the persistence of enhanced rainfall over the last four weeks, this reportedly triggered numerous flooding events and other adverse ground impacts over many areas in southeastern Africa during January.

With several weeks of the monsoon remaining in February and March, the spatial distribution of end-of-season precipitation anomalies has taken shape. SPP analysis for the Dec-Feb timeframe suggests a high certainty that seasonal rainfall will remain above-average by the end of February due to torrential rainfall in January. In some areas in Zimbabwe and Mozambique, total seasonal rainfall to date has already surpassed the end of season normal total. Towards the north, there is now a high likelihood for near average rainfall across southeastern Angola, Zambia, Malawi and central Mozambique (**Figure 2**). Many of these areas had experienced a slow start, but have recovered well during the last month. Conversely, there is a high probability that seasonal rainfall will be well below average for several parts of Tanzania, northeastern Mozambique, and eastern Madagascar.

For the upcoming outlook period, models suggest a large increase in seasonal rainfall north of the Zambezi River basin during early February. Torrential precipitation accumulations in excess of 150mm over central and eastern Zambia, Malawi, northern Mozambique and southern Tanzania are possible due to a broadly strong zone of atmospheric convergence (**Figure 3**). While increased rainfall is expected to mitigate seasonal moisture deficits over Tanzania and Mozambique, excessive rainfall along the Zambezi River basin and in the central and eastern provinces in Zambia and Malawi is expected to elevate the risk for flooding during early February. In Madagascar, models suggest the possibility of developing tropical cyclone which may bring increased rainfall amounts over many eastern and southeastern parts of the island.

Satellite-Estimated Rainfall (mm)
Valid: January 22 – January 28, 2017

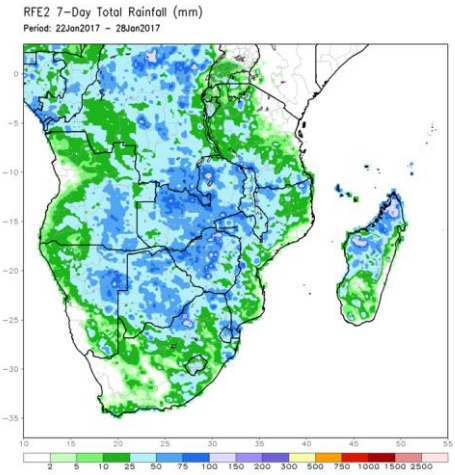


Figure 1: NOAA/CPC

SPP Probability of Below-Average (<80% of Normal) Rainfall
Valid: December, 2016 – February, 2017

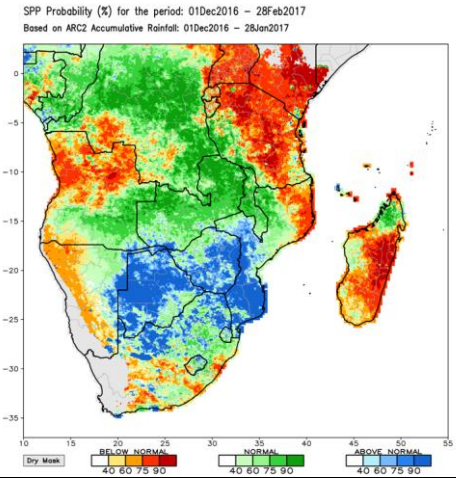


Figure 2: NOAA/CPC

GFS Ensemble Mean Precipitation Forecast (mm)
Valid: January 30 – February 6, 2017

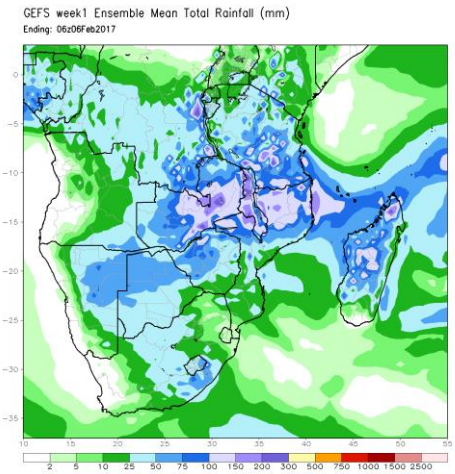


Figure 3: NOAA/CPC

Note: The hazards outlook map on page 1 is based on current weather/climate information and short and medium range weather forecasts (up to 1 week). It assesses their potential impact on crop and pasture conditions. Shaded polygons are added in areas where anomalous conditions have been observed. The boundaries of these polygons are only approximate at this continental scale. This product does not reflect long range seasonal climate forecasts or indicate current or projected food security conditions.

Questions or comments about this product may be directed to Wassila.Thiaw@noaa.gov or 1-301-683-3424.